

## **REMARKS**

Claims 119-153, 231 and 233-313 are now pending. Claims 168-230 and 232 have been canceled herein. New claim 313 has been presented herein. Applicants note that there are three independent claims currently pending: 119, 233, and 273. Applicants have concentrated the following remarks and arguments in support of the patentability those claims, as the allowance of those claims should yield the allowance of all of the pending claims.

### **I. Applicants' Summary of Interview**

Applicants greatly appreciate the Office's time and participation in the personal interview with the Applicants' representatives on August 23, 2006. The Office provided the following Interview Summary dated September 12, 2006:

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Mr. Stanley discussed key claimed features of invention vs. required features of the reference (permanent deformation and stretching, three kinds of fibers, especially the resilient fibers). He presented reasoning that the claimed strength, absorbency and formation could not result from applying the requirements of the reference in a low basis weight sheet. The reference also distinguishes between permanent deformation and embossing. He also explained that the inventive fibers were themselves made hydrophilic, not the dispersion, as in some of the references. He also indicated that inventor had tried to make tissue similar to that of the reference and could not obtain good formation. Ex. Cordray asked if Affidavit from Inventor would be possible. Mr. Stanley indicated that the fibers used were not exactly the same. Ex. Hug explained the difficulty in dispersing synthetic fibers and obtaining good formation from personal experience. No agreement on patentability was reached.

Pursuant to MPEP § 713.04, Applicants provide the following substance of that interview. Applicants asserted that European Patent No. 0 810 078 A1 to Schmidt ("Schmidt"), taken in view of any of the references of record, fails to render obvious the subject matter recited in any the instant claims. In particular, Schmidt and the other references would not have rendered obvious to the skilled artisan a tissue web formed

according to independent claim 119, e.g., at a line speed in excess of 1000 feet/minute and exhibiting the combination of a basis weight of less than about 35 pounds/ream and a formation index of greater than about 42. In addition, Schmidt and the other references would not have rendered obvious to the skilled artisan a tissue web formed according to independence claim 233, e.g, at a line speed in excess of 1000 feet/minute and exhibiting a CD wet breaking length of at least about 250 meters and a SAT capacity of at least 5 grams/gram. Finally, Schmidt and the other references certainly would not have rendered obvious to the skilled artisan a tissue web exhibiting all of those properties, as recited for example in independent claim 273.

Applicants noted that Schmidt is directed to a high basis-weight, high-wicking fluid-distribution layer, and not to a lower basis-weight, absorbent tissue product as may be exemplified in the present claims. Applicants explained that the fluid distribution layer of Schmidt requires three separate components:

1. a resilient, chemically stiffened fiber for mechanical deformation;
2. a large surface to mass ratio fiber; and,
3. a bonding agent that may be a thermally bondable thermoplastic fiber.

Applicants further explained that Schmidt teaches that the resilient, chemically stiffened fiber is required in order for the fluid distribution layer to withstand what the reference refers to as the post-formation “key process step.” That mandatory step involves the pressurization and stretching of the web in order create a “permanent deformation” and aid in the wicking properties of the web. Schmidt also differentiates the permanence and severity of that “key process step” from standard embossing steps.

The make-up of the web taught by Schmidt, and in particular the necessary inclusion of sufficient quantities of the resilient, chemically stiffened fibers, increase the basis weight of that web and would prevent it from exhibiting the above-mentioned properties as recited by the pending claims. In addition, Applicants asserted that a low basis weight tissue product, such as recited in pending independent claims 119 and 273, would not be capable of withstanding the rigorous, permanent mechanical deformation process required by Schmidt. Of course, Schmidt would not have provided the skilled artisan with any motivation to remove those fibers or to omit the “key” process step, as the inventive and important features of the disclosure would be lost.

Applicants also asserted that none of the secondary references are able to remedy those deficiencies. While some of the references may teach webs with some of the same properties as the instant claims, the webs of the secondary references neither meet all of the remaining recitations of the instant claims, nor are of the type recited in Schmidt. Therefore, those references would not have provided the skilled artisan with any motivation to modify Schmidt or with any expectation of success in achieving a web according to the pending claims. In particular, at least because none of the secondary references teach or disclose the inclusion of a resilient, chemically stiffened fiber, it would be improper to attribute their properties to a web formed according to the teachings of Schmidt. In fact, during the interview, Examiner Hug noted from personal experience the difficulty in attempting to disperse synthetic fibers, such as the recited thermally bondable fibers exhibiting hydrophilicity, while also achieving web formation on the order expressly recited in independent claims 119 and 273.

Lastly, Applicants noted certain differences between thermally bondable fibers exhibiting hydrophilicity, such as those recited in the pending claims, and thermally bondable fibers noted in some of the cited references that do not themselves exhibit hydrophilicity, but instead are hydrophobic and are able to be dispersed in a headbox only through the use of a separate hydrophilic dispersing agent. See EP 0 465 203 A1 to Neilson et al., page 6, lines 9-14. The skilled artisan would easily understand that latter kind of fibers are not “thermally bondable fibers exhibiting hydrophilicity,” as recited in the pending claims.

Once again, Applicants appreciate the Office’s personal interview with their representatives. If the undersigned misunderstood any part of the interview as reflected in the above statement of its substance, Applicants respectfully request that the Examiner please contact the undersigned to discuss an appropriate resolution.

## **II. Support for New Claim 313**

New claim 313 depends from claim 119 and recites “further comprising: embossing said nascent tissue web; and heat treating said nascent tissue web at a temperature of at least about 200°F; wherein the thermally bondable fibers are chosen from at least one of bicomponent and tricomponent fibers,” which is fully supported in the original specification by at least paragraphs [018] and [057] and original claim 168.

In light of at least this support in the original specification, Applicants submit that the new claim does not add any prohibited new matter and that the skilled artisan would readily understand Applicants to have been in possession of the claimed subject matter

at the time this application was filed. Therefore, Applicants request that the Office enter new claim 313 without objection.

### **III. Rejection under 35 U.S.C. § 112**

The Office rejected claims 119, 168, and 273 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. In particular, the Office asserts that the specification does not contain support for the recitation “a basis weight of less than about 35 pounds/ream” and believes that the specification only reveals basis weights of from 10 to 35 pounds/ream. *See* Office Action at 2. Applicants respectfully traverse this rejection.

Support for the noted recitation can be found in the original specification in at least original claim 22, which recited “a basis weight of not more than about 60 pounds/ream.” That recitation, which necessarily forms a part of the original specification (*see* MPEP § 2163.06(III)), provides for basis weights ranging from 0 to about 60 pounds/ream and includes the subject matter of the rejected claim. Thus, Applicants submit there is proper support under 35 U.S.C. § 112, first paragraph, for the rejected claims and respectfully request that the rejection be withdrawn.

### **IV. Rejection under 35 U.S.C. § 103(a)**

The Office has rejected claims 119-153, 168-194, and 230-312 under 35 U.S.C. § 103(a) over Schmidt in view of a number of secondary references. In each of the rejections, the Office relies upon Schmidt as the primary reference solely for the assertion that the prior art teaches or suggests dispersing papermaking fibers in a first

aqueous solution and dispersing thermally bondable fibers exhibiting hydrophilicity in the first or a second aqueous solution, as is recited in the pending claims. See Office Action at 3-9. Applicant's respectfully traverse those rejections.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to have modified the reference or to have combined reference teachings in an effort to achieve the subject matter of the rejected claims. Second, the skilled artisan must have had a reasonable expectation of success in making the asserted modification or combination. Finally, the reference or references must teach or suggest all the claim limitations. See MPEP § 2143. Applicants submit that the references cited in the Final Office Action fail to meet any of those requirements and the rejection should be withdrawn.

Instead of teaching a low basis weight, absorbent tissue product as recited in at least independent claims 119 and 273, Schmidt is directed to a high basis weight, high wicking fluid distribution layer that requires three separate components:

1. a resilient fiber (preferably a chemically-stiffened, twisted, bulking cellulosic fiber);
2. a fiber exhibiting a large surface to mass ratio (preferably a conventional cellulosic pulp fiber); and,
3. a bonding agent (which may be a thermally bondable thermoplastic fiber).

Page 4, lines 6-8. The reference teaches that the resilient, chemically stiffened fiber is required in order for the fluid distribution layer to withstand its "key process step" (see

page 7, lines 29-32 and page 3, line 58 through page 4, line 2), which involves the pressurization and stretching of the web in order create a “permanent deformation” to aid in its wicking properties (page 7, lines 35-40).

As the Office admits on page 5 of the Final Office Action, Schmidt does not teach or disclose that its fluid distribution layer would contain any of the web properties recited in independent claim 273: a basis weight of less than about 35 pounds/ream; a formation index of greater than about 42; a CD wet breaking length of at least about 250 meters; or, a SAT capacity of at least 5 grams/gram. Instead, the Office points to the secondary references for other examples of paper products that may contain some of those properties. However, simply because one type of paper product may be capable of possessing some of the above-listed properties does not mean that the paper product taught by Schmidt would be capable of possessing those properties, or that the skilled artisan would have been motivated to combine the references in order to achieve the claimed products of this application.

In particular, Applicants note that none of the secondary references teach or suggest the resilient, chemically stiffened fiber that is required by Schmidt. As Applicants have already shown, the skilled artisan would not have been motivated to remove a sufficient quantity of that mandatory fiber, lest the resulting product not be able to withstand the “key process step” for permanent deformation. Schmidt specifically teaches that its web must contain fibers that are plastically deformable in order to be suitable for that “key” step. See page 3, line 58 through page 4, line 2. The resilient, chemically stiffened fibers are included for just that purpose. See page 4, line 6. As such, any modification of Schmidt to remove sufficient quantities of those resilient

fibers would impermissibly destroy the process and intended purpose of Schmidt's product. *See* MPEP § 2143.01 ("The proposed modification cannot render the prior art unsatisfactory for its intended purpose.").

As discussed in further detail below, it is simply improper to conclude that the properties of one paper product would be the same as the properties of a second paper product that was made with a completely different composition of fibers and by a completely different process. The Schmidt product lacks several characteristics of the paper products recited in the pending claims and the secondary references do not remedy those deficiencies.

**A. Schmidt's product would not possess a basis weight of at least about 35 pounds/ream.**

The fluid distribution layer of Schmidt is purposely designed to be capable of withstanding permanent deformation in a rigorous mechanical post-formation process. The skilled artisan readily understands that a low basis weight, absorbent tissue product would not be capable of withstanding such strenuous deformation. In addition, while the Office points out that Schmidt does not disclose that the basis weight of its paper product must be absolute (*see* Final Office Action at page 10), the Office has not provided any reference revealing that a paper product may survive such a process with a basis weight of less than about 35 pounds/ream, as recited in at least claims 116 and 232. In fact, Schmidt's only disclosure of basis weight is a product at 92 pounds/ream—a basis weight that is nearly three times the basis weight recited in at least claims 116 and 232. *See* page 10, lines 15-48. That high basis weight is due, at least in part, to the necessity of including a sufficient amount of resilient, chemically stiffened fibers. As



such, the skilled artisan would readily recognize that the high basis weight is necessary so that the web of Schmidt would be able to withstand the “key process step” of post-formation mechanical treatment.

**B. Schmidt does not disclose a formation index of greater than about 42.**

Applicants assert that the paper product of Schmidt would not have a formation index of greater than about 42, as recited by independent claims 119 and 273. Although Schmidt does note that its product may be used alone as an end-use product (page 13, lines 20-23), the teaching of Schmidt clearly indicates that it is designed and intended to be used as a fluid distribution layer for use in an absorbent product, such as a diaper. Good formation of the web is not of particular concern in such an application. Moreover, Schmidt never teaches or suggests that its paper product would possess good formation, such as a formation index of greater than about 42, or suggest why formation would be beneficial in its fluid distribution layer.

**C. Schmidt’s product would not possess a SAT capacity of at least about 5 grams/gram.**

Applicants assert that the skilled artisan would understand that the paper product of Schmidt would not have a SAT capacity of at least about 5 grams/gram, as recited by independent claims 233 and 273. The standard absorbancy test (SAT) measures the absorptive capacity and rate of a paper product. For consumer tissue products, absorbency may be a desirable and even a critical property. In complete contrast, Schmidt’s product is not designed as an absorbent material, but rather as a fluid distribution material with improved wicking. *See abstract.* The skilled artisan would readily recognize that, in general, increasing a product’s absorbency would decrease its

ability to act as a fluid transfer or distribution medium. For that reason, Schmidt teaches that its fluid distribution layer is primarily intended to be used along with a separate fluid absorbent layer. See, e.g., page 14, lines 24-26. Therefore, Schmidt's product teaches away from a paper product having a SAT capacity of at least about 5 grams/gram, a defect that is not remedied by the secondary references.

**D. The secondary references do not remedy the defects of Schmidt.**

The Office cites seven secondary references in order to attempt to remedy the above-mentioned defects of Schmidt. In particular, the Office cites those references in an effort to show paper products that exhibit either a basis weight of less than about 35 pounds/ream, a formation index of greater than about 42, a CD wet breaking length of at least about 250 meters, or a SAT capacity of at least 5 grams/gram, and which are formed at a line speed in excess of 1000 feet/minute. As explained above, while some of the cited secondary references disclose webs that may possess some of the same properties as the claimed webs, those webs are not of the type disclosed in Schmidt. The skilled artisan simply would not have been motivated to combine any of the secondary references with Schmidt, at least due to the primary references' particular focus on fluid distribution and permanent deformation. Moreover, none of the secondary references teach or disclose paper webs that include the resilient, chemically stiffened fiber required by Schmidt. Therefore, even if the skilled artisan would have been motivated to make one of the Office's combinations by combining some of the teachings of the secondary references with the teachings of Schmidt, there would have been no reasonable expectation of success in achieving any of the paper products

described and claimed in this application. Therefore, there can be no *prima facie* case of obviousness of any of the pending claims.

## V. Conclusion

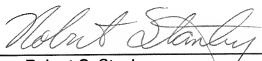
Applicants have noted why the rejected claims satisfy the written description requirement. Moreover, as discussed in the Examiner's Interview and in the remarks presented above, Applicants have shown that none of the references of record, either alone or in any combination, can properly support a *prima facie* case of obviousness. Therefore, Applicants respectfully request the rejections be withdrawn and the pending claims be passed to allowance.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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By:   
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